

ARCHITECT FOR CELLS
EXPERT IN 3D MANUFACTURING OF HIGH-QUALITY CELLS



3D FloTrix™

MSC Serum Free Medium (SFM) STANDARD

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3D FloTrix™ Serum Free Medium (SFM) STANDARD

3D FloTrix™ MSC Serum Free Medium (SFM) STANDARD is a serum-free, animal component-free culture medium specifically designed for stem cell proliferation and maintenance. It offers exceptional cost-effectiveness and guaranteed safety, supporting drug registration clients in successfully navigating pharmaceutical applications while accelerating biopharmaceutical development processes.



3D FloTrix™ MSC Serum Free Medium (SFM) STANDARD

Product Composition

Product Name	Cat. No.	Specification	Storage
3D FloTrix™ MSC Serum Free Basal Medium	RMZ112-PYJ	500 mL/bottle	4 °C
3D FloTrix™ MSC Serum Free Supplement STANDARD	RMZ173-B	25 mL/bottle	-20 °C

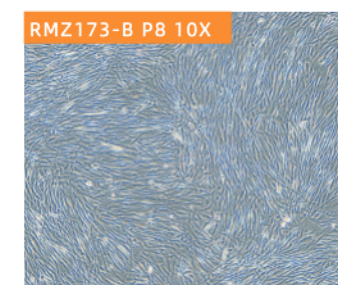
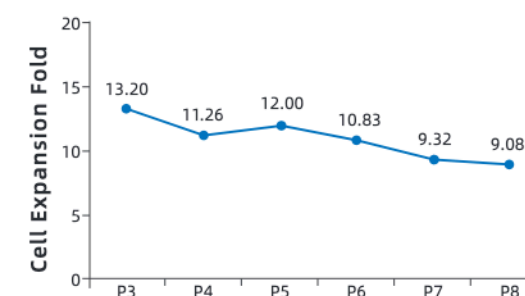
Thoroughly mix the basal medium (RMZ112-PYJ) with the supplement (RMZ173-B) to prepare the complete medium. The prepared complete medium can be stored at 2-8°C and it is recommended to use within 2 weeks.

Product Features

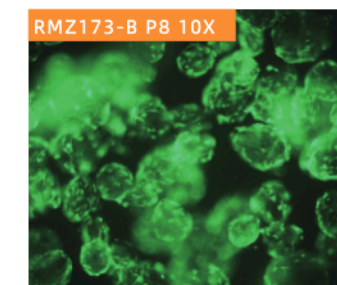
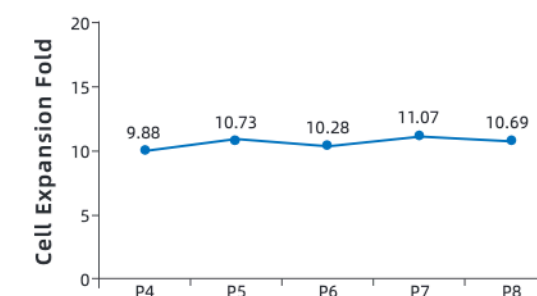
- Universal Raw Materials**
Self-developed products with readily available raw materials and stable supply chain.
- High Cost-Effectiveness**
High-performance culture medium at accessible pricing, enabling high-output at a low cost.
- Assured Safety & Quality**
Manufactured in GMP-compliant facilities with rigorous quality management systems.
- Ready-to-Use**
No coating or extra supplements needed.
- High Performance**
Compatible with both 2D & 3D culture systems.
Suitable for primary cell isolation and continuous subculture.

Continuous Subculture

MSCs cultured with 3D FloTrix™ MSC SFM STANDARD are able to maintain stable and efficient proliferation across passages, while retaining their characteristics and tri-lineage differentiation potential.



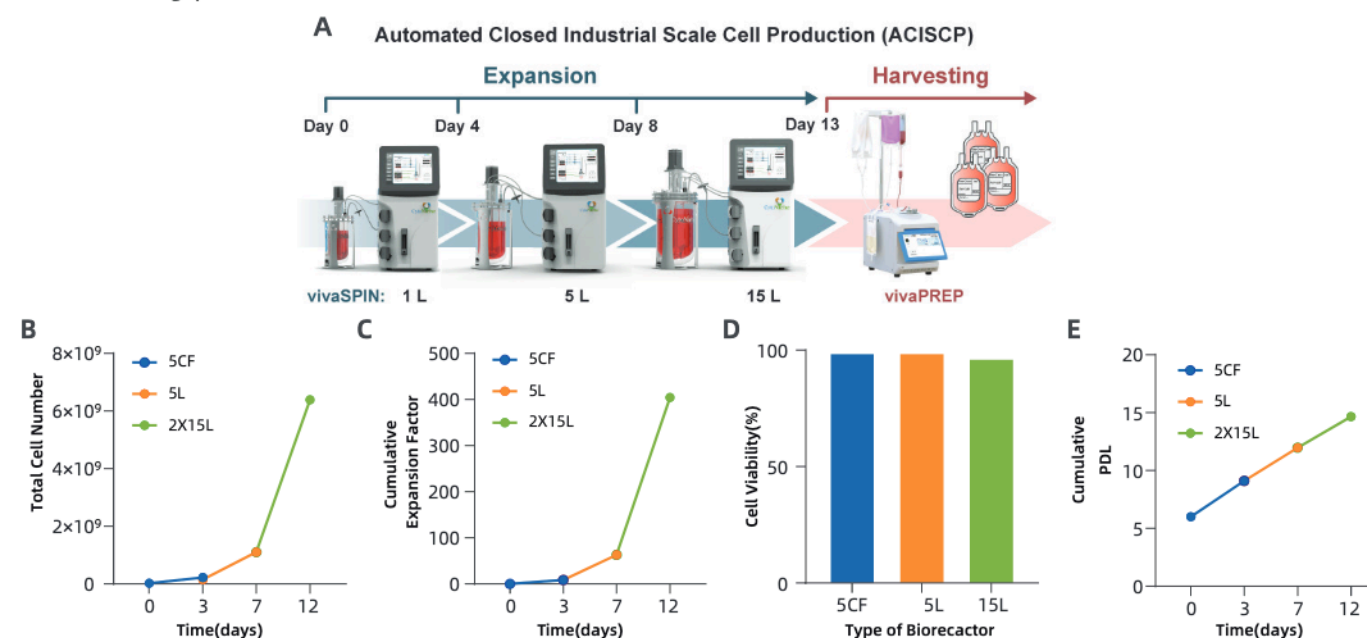
Continuous 2D Subculture of UCMSCs (P3→P8)
Morphology of MSCs (Passage 8) replated on culture flask after harvesting from continuous subculture on 2D planar flasks.



Continuous 3D Subculture of UCMSCs (P4→P8)
Morphology of MSCs (Passage 8) harvested from continuous subculture on 3D TableTrix™ Microcarriers.

Industrial-Scale 3D Manufacturing

3D FloTrix™ MSC SFM STANDARD demonstrates outstanding culture performance in stepwise scaled-up 3D manufacturing processes.

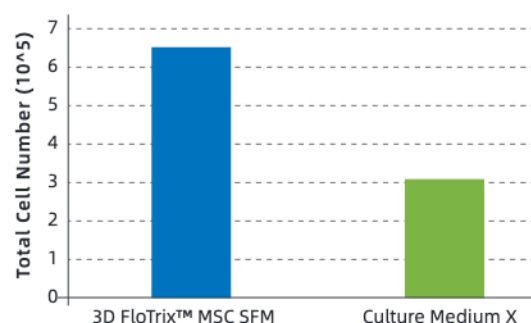


- A. Three-stage scale-up platform
- B. Cumulative cell numbers harvested in the scale-up process
- C. Cumulative cell expansion fold in the scale-up process
- D. Cell viability at each stage of scale-up
- E. Cumulative population doubling level (PDL) of cells in the scale-up process

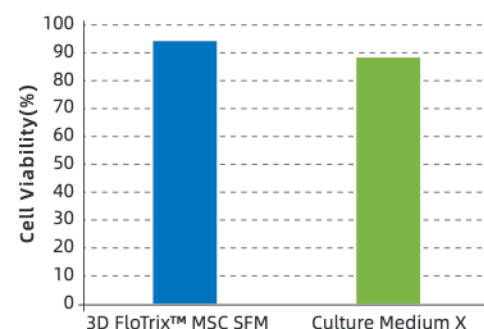
Reference
GMP-grade microcarrier and automated closed industrial scale cell production platform for culture of MSCs. J Tissue Eng Regen Med. 2022 Oct;16(10):934-944. doi: 10.1002/term.3341. Epub 2022 Aug 5. PMID: 35929499.

Primary Cell Isolation and Culture

Umbilical cord-derived MSCs were isolated using 3D FloTrix™ MSC SFM STANDARD and culture medium X, respectively. After 14 days of culture, results showed that the number of MSCs harvested from the 3D FloTrix™ MSC SFM STANDARD culture was higher than that from culture medium X, and the cells remained in good condition when continuously cultured to P5.



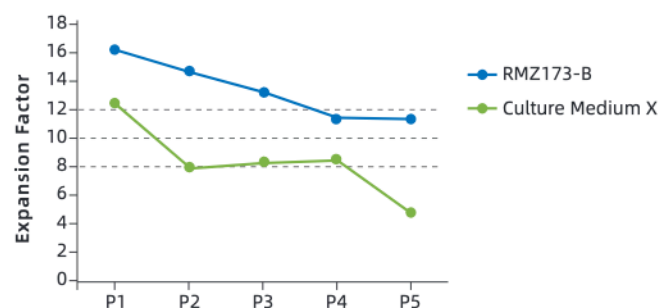
Yield of Primary Cells(P0) from Umbilical Cord



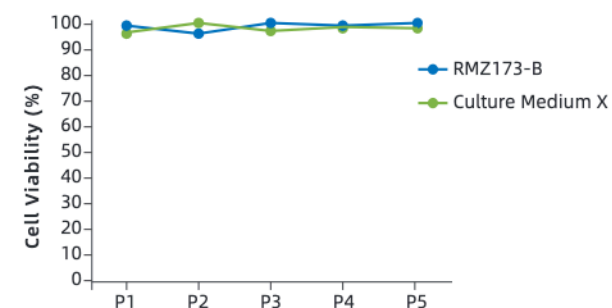
Viability of Primary Cells (P0) Harvested from Umbilical Cord

Primary Isolation and Serial Subculture

3D FloTrix™ MSC SFM STANDARD can be used for primary isolation and culture as well as subculture (P1→P5).

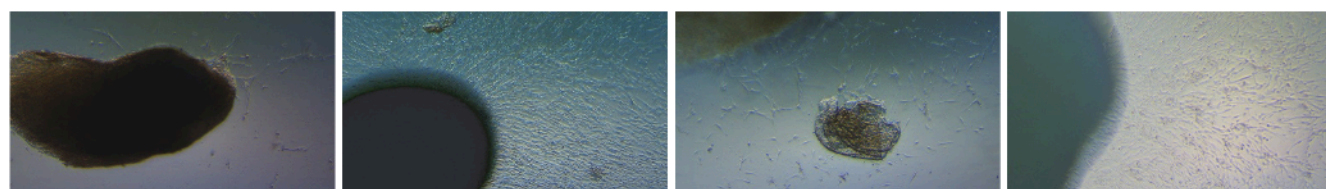


Continuous 2D Subculture of UCMSCs (P1→P5)



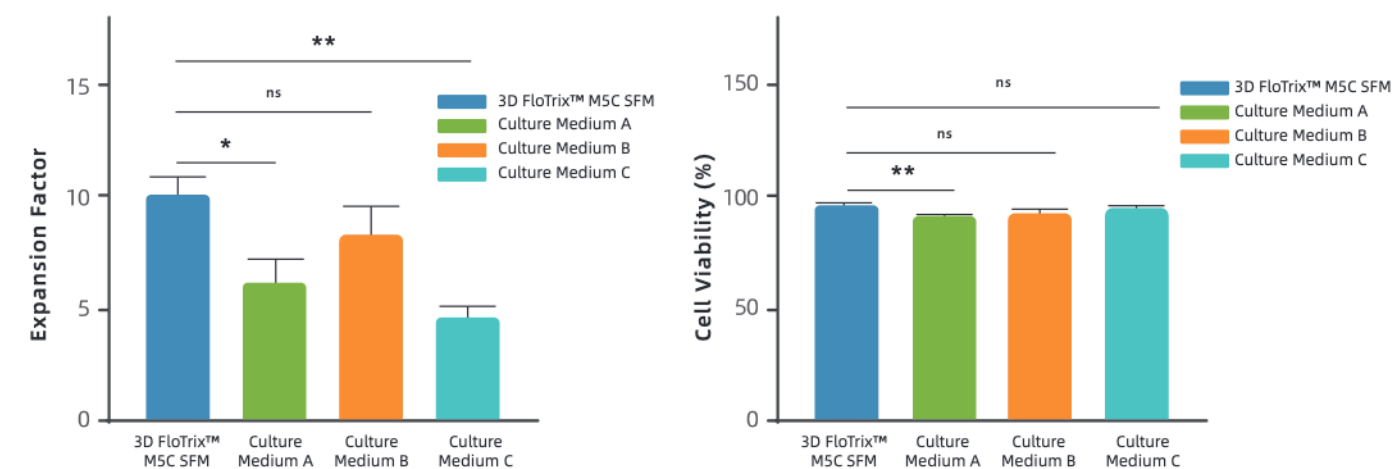
Continuous 2D Subculture of UCMSCs (P1→P5)

Cells cultured in 3D FloTrix™ MSC SFM STANDARD exhibit significantly earlier migration from tissue explants, with comparative analysis clearly demonstrating a significantly higher cell migration density than that in the medium of the culture medium X.



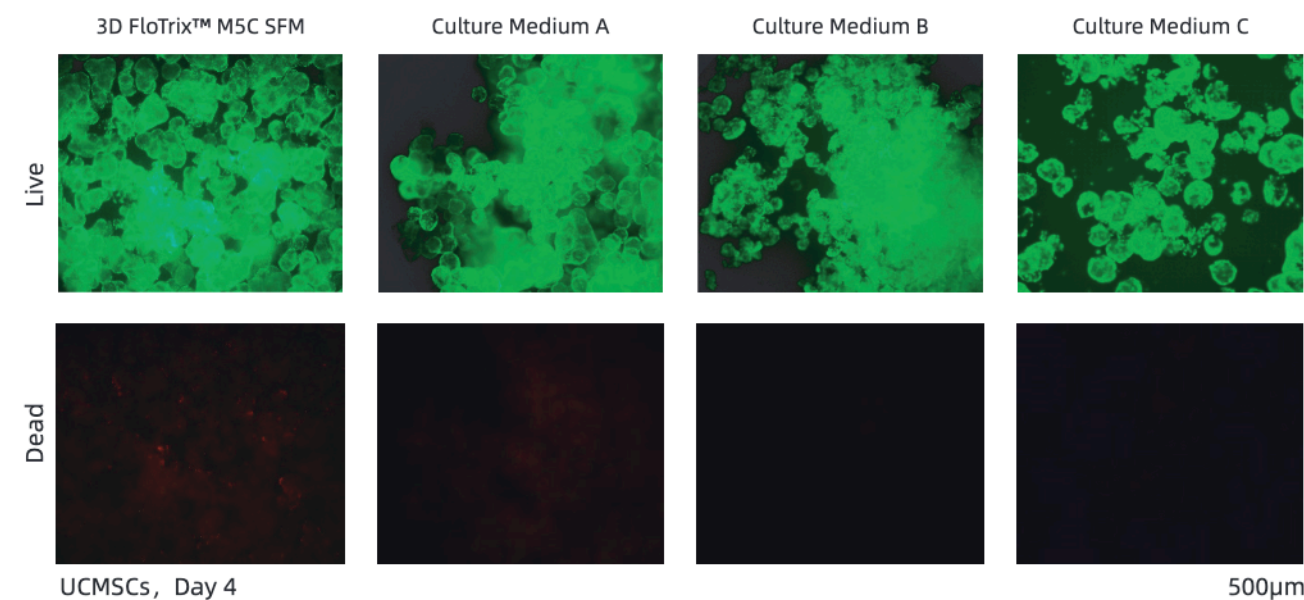
3D FloTrix™ MSC SFM STANDARD D3 Cell Migration-Out Image 3D FloTrix™ MSC SFM STANDARD D9 Cell Migration-Out Image Culture Medium X D8 Cell Migration-Out Image Culture Medium X D14 Cell Migration-Out Image

Comparison of Performance on 3D Microcarriers



Notes:

- 1.Data shown is for 4-day culture(triplicates) of UCMSCs on 3D microcarriers in spinner flasks at an initial density of 2.5 million cells/100 mg microcarriers.
- 2.One-Way ANOVA analysis used for statistical analysis.



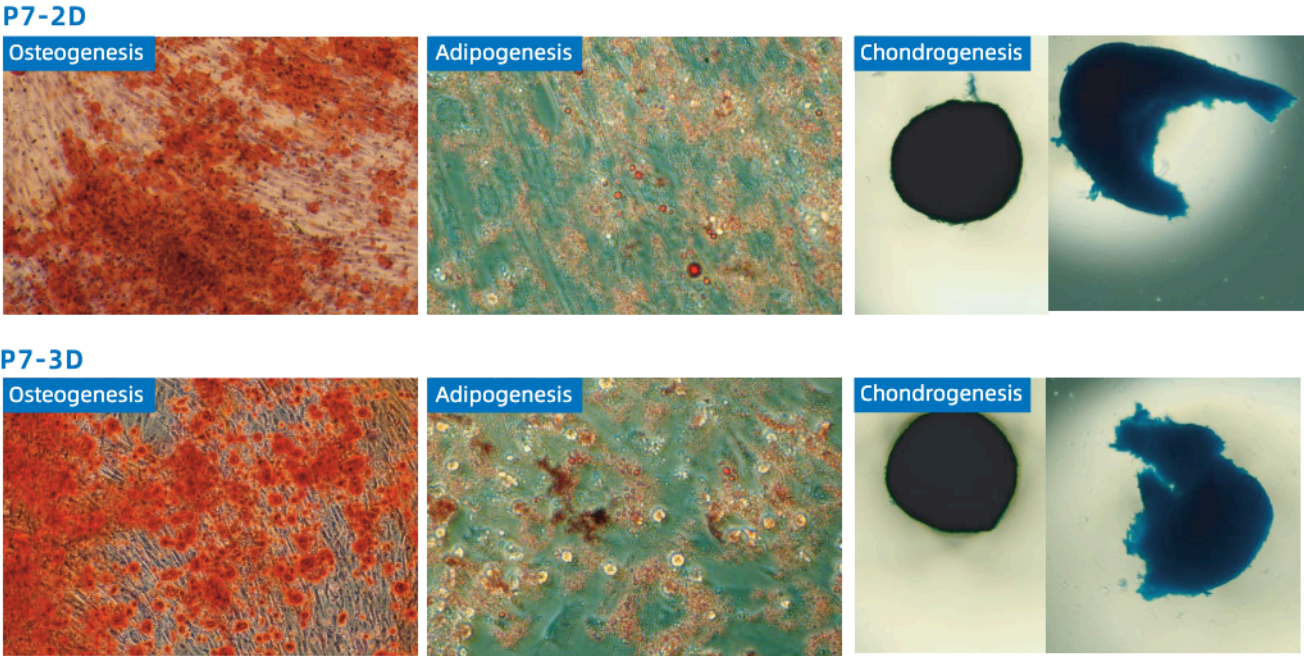
Notes:

Culture medium A-C are commercially available serum-free media from different brands.

Cell Quality Assessment

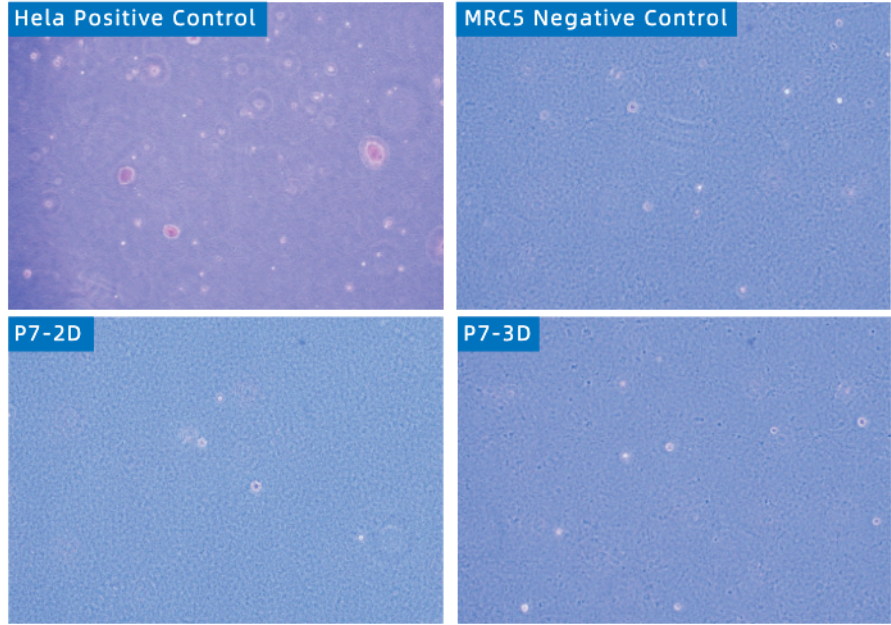
Umbilical Cord Mesenchymal Stem Cells (UCMSCs) were serially passaged up to Passage 7 (P7) in both 2D and 3D cultures using RMZ173-B. The cells maintained compliance with standard stem cell quality control criteria throughout the process.

Trilineage Differentiation Potential



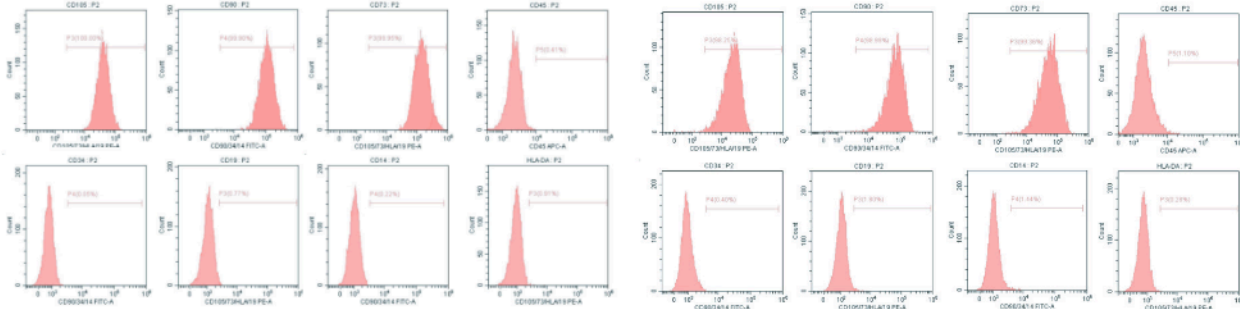
UCMSCs Maintain Good Tri-Lineage Differentiation Ability (P7)

Cell Colony Formation Assay



UCMSCs Passed the Colony Formation Assay in Soft Agar (P7)

Flow Cytometric Analysis



FACS Analysis of UCMSCs (2D P7) FACS Analysis of UCMSCs (3D P7)

Genetic Stability Analysis



Chromosomal Karyotype Stability of UCMSCs (2D P7) Chromosomal Karyotype Stability of UCMSCs (3D P7)

Ordering Information

Model	Product Name	Specification
RMZ112-PYJ	3D FloTrix™ MSC Serum Free Basal Medium	500 mL/bottle
RMZ173-B	3D FloTrix™ MSC Serum Free Supplement STANDARD	25 mL/bottle
RMZ112-B	3D FloTrix™ MSC Serum Free Supplement	25 mL/bottle
W01-200	3D TableTrix™ Microcarriers W01 (Tablets)	2 g/box
R001-500	3D FloTrix™ Digest	0.5 g/box